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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,248	11/13/2003	Evgeniya Freydina	10168-7078.19	8583

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EXAMINER	
HOEY, BETSEY MORRISON	
ART UNIT	**PAPER NUMBER**
1724	

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/712,248	FREYDINA ET AL.	
	Examiner	Art Unit	
	Betsey M. Hoey	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-72* is/are pending in the application.

4a) Of the above claim(s) *1-20,32-35,44-47 and 67-72* is/are withdrawn from consideration.

5)☒ Claim(s) *42,43,65 and 66* is/are allowed.

6)☒ Claim(s) *21-27,30,31,36,39 and 48-62* is/are rejected.

7)☒ Claim(s) *28,29,40,41,63 and 64* is/are objected to.

8)☒ Claim(s) *1-72* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/04,9/04,4/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-20, 32-35, 44-47 and 67-72, drawn to a system for storing fluid and/or water and/or treating water, classified in class 204, subclass.

II. Claims 21-31, 36-43 and 48-66, drawn to a method for treating water, classified in class 210, subclass 748.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used to practice a materially different process, such as a process for treating a non-aqueous fluid.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with Mr. Elias Domingo on May 20, 2005 a provisional election was made without traverse to prosecute the invention of Group II, claims 21-31, 36-43 and 48-66. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-20, 32-35, 44-47 and 67-72 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

5. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings filed on November 13, 2003 appear to be informal.

6. Claim 41 is objected to because of the following informalities: "30" is a typographical error which should be "36". Appropriate correction is required.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> Or
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 36 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Re 36,972 to Baker et al. Referring to Figure 5, Baker et al. teach a method for purifying water comprising storing a brine solution in a reservoir 212, removing oxidizable contaminants in the solution in electrolytic cell 210, measuring the ozone concentration or pH of the treated water with sensor 215, and controlling flow rate

through the electrolytic cell in response to the measurement by sensor 215. It is submitted that in order to control flow rate by sensed measurement, it is inherent that the sensed measurement is compared with some set measurement as recited in the instant claims. It is further submitted that since treated water is not mixed with entry water in Baker et al., the method "minimizes mixing" as recited in instant claim 39.

9. Claims 48-50, 54 and 55 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,146,524 to Story. Referring to Figure 1, Story teaches a method for treating water comprising storing water in tank 140 from inlet 144, removing contaminants by ozonation, and storing treated water in tank 152. There is no mixing of treated water in tank 152 shown. The tanks of Story may be considered vessels of a reservoir system. The method of Story comprises measuring water level in tank 140 with level sensors.

10. Claims 48-55 rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,808,608 to Srinivasan et al. Srinivasan et al. teach a method for purifying water comprising storing water in a pressurized reservoir, treating the water in an electrodeionizer, storing treated water in a pressurized reservoir, and measuring the pressure of the treated water. Srinivasan et al. do not teach an mixing, and therefore mixing is considered to be minimized.

11. Claims 56-59 and 61 are rejected under 35 U.S.C. 102(b) as being anticipated by Story. Referring to Figrure 1, Story teaches a method for treating water comprising storing water from inlet 122 in tank 120, removing oxidizable contaminants by ozone, and storing treated water in tank 140. The volume of water in tanks 120 and 140 are

adjusted according to their levels, which varies according to demand by a user. The water from tank 140 may be delivered to a user for drinking. The tanks may be considered as part of first and second vessels and/or zones of a reservoir system.

12. Claims 56 and 59-61 are rejected under 35 U.S.C. 102(e) as being anticipated by Srinivasan et al. Srinivasan et al. teach a method described above, which also includes delivering water from the treated water reservoir to a pump for providing the purified water to a point of use. The reservoirs of Srinivasan et al. may be considered as part of first and second vessels and/or zones of a reservoir system.

13. Claim 62 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,190,553 to Lee. Referring to Figure 5, Lee teaches a method for treating water comprising storing water in storage tank 1, aerating and releasing volatilized contaminants via aerator 15 and vents 23, removing sludge in sedimentation tank 3, and storing treated water in storage tank 4.

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 21-27, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,630,378 to Bauman in view of U.S. Patent No. 6,783,666 to Takeda et al. Bauman discloses a method for softening water comprising storing water from a raw water supply line, desalinating using an electrodialysis unit to produce treated water, transferring treated water either to a point of use or to a storage

vessel, wherein the stored treated water may be in the same storage vessel as the stored raw water. The water may be treated in a single pass, or may be stored and then passed through the treatment unit again prior to use, and thus the method of Bauman may comprise "post treatment" as recited in claim 31.

The claims differ from Bauman by reciting measuring a property of treated water (claim 21), storing treated water under pressure above atmospheric pressure (claim 23), minimizing mixing when storing treated water with water from a point of entry (claim 25), calculating a desired property based on the measured property of water (claim 26), and adjusting an operating parameter of the electrochemical device based on the calculated property (claim 27). Bauman discloses that when the same storage vessel is used for raw water and treated water, they are stored in separate sections and therefore mixing is minimized.

Takeda et al. disclose a method for softening water, that is analogous to the method of Bauman because both methods solve the problem of hard water by softening the water prior to delivery to a user. Takeda et al. disclose measuring the hardness of treated water, and controlling the operation of the water softener by initiating regeneration as calculated by an inlet hardness measurement.

It would have been obvious to one of ordinary skill in the art, at the time the present invention was made, to have included the hardness indication and controlling steps of Takeda et al. in the method of Bauman, in order to ensure desired softening of the water being treated. It is submitted that Bauman discloses that the arrangement of water treatment unit will depend on required pressure differentials, and Bauman also

discloses pressurizing water with a pump. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the present invention was made, to have practiced the method of Bauman wherein the stored water is under a pressure above atmospheric pressure, in order to access the stored water on demand at a point of use without the requirement of pumps in addition to the pump shown in the Figures of Bauman. It is further submitted that periodic maintenance and cleaning of an apparatus used to treat water is expected when practicing a method such as that of Bauman, and therefore one of ordinary skill in the art would have been expected to disinfect at least a portion of the electrodialysis unit of Bauman if and when necessary.

16. Claims 42, 43, 65 and 66 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

17. Claims 28, 29, 37, 38, 40, 41, 63 and 64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

18. The following is a statement of reasons for the indication of allowable subject matter:

Claim 28 would be allowable if rewritten in independent form including all of the limitations of claims 21, 26 and 27 because the prior art of record fails to teach, disclose, or fairly suggest a method for providing treated water comprising measuring LSI of water, in combination with all of the other steps recited in the referenced claims.

Claim 29 would be allowable if rewritten in independent form including all of the limitations of claims 21, 26 and 27 because the prior art of record fails to teach, disclose, or fairly suggest a method for providing treated water comprising adjusting the cycle time of an electrochemical device based on a calculated desired property, in combination with all of the other steps recited in the referenced claims.

Claim 37 would be allowable if rewritten in independent form including all of the limitations of claim 36 because the prior art of record fails to teach, disclose, or fairly suggest a method for providing treated water comprising pretreating water prior to removing undesired species, in combination with all of the other limitations of instant claim 36.

Claim 38 would be allowable if rewritten in independent form including all of the limitations of claim 36 because the prior art of record fails to teach, disclose, or fairly suggest a method for providing treated water comprising controlling a flow to a point of used based on the difference between a property of treated water and a set point, in combination with all of the other limitations of instant claim 36.

Claim 40 would be allowable if rewritten in independent form including all of the limitations of claim 36 because the prior art of record fails to teach, disclose, or fairly suggest a method for providing treated water comprising mixing water from a point of entry with treated water, in combination with all of the other limitations of instant claim 36.

Claim 41 would be allowable if rewritten in independent form including all of the limitations of claim 36 because the prior art of record fails to teach, disclose, or fairly

suggest a method for providing treated water comprising removing undesired species from the water in an electrodeionization device, in combination with all of the other limitations of instant claim 36.

Claim 42 is allowed because the prior art of record fails to teach, disclose, or fairly suggest a method for facilitating water treatment comprising providing an electrochemical device fluidly connected to a reservoir system, wherein the reservoir system has a water property sensor; and regulating water from the reservoir system to a point of use by a controller connected to the water property sensor. It is submitted that other prior art methods disclose electrochemical devices in combination with controllers, but none of the prior art methods of record disclose regulating water from the reservoir system *to a point of use* by a controller connected to a water property sensor as recited with all of the other limitations of the instant claim.

Claim 43 is allowed because the prior art of record fails to teach, disclose, or fairly suggest a method for facilitating water treatment comprising providing a water treatment system comprising a reservoir system having a baffle plate and electrodeionization device and being fluidly connectable to a point of entry and water distribution system.

Claims 63 and 64 would be allowable if rewritten in independent form including all of the limitations of claim 62 because the prior art of record fails to teach, disclose, or fairly suggest a method for purifying water comprising removing undesirable species from water in an electrochemical device, in combination with all of the other limitations of instant claim 62.

Claims 65 and 66 are allowed because the prior art of record fails to teach, disclose, or fairly suggest a method for purifying water comprising storing water from a point of use, aerating the stored water, removing undesirable species from the water in an electrodeionization device, and storing treated water.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betsey Hoey whose telephone number is **(571) 272-1158**. The examiner can normally be reached on Mondays, Tuesdays, and Thursdays. The examiner's supervisor, Mr. Duane Smith, may be reached at (571) 272-1166. Any inquiry of general nature may be directed to the Group receptionist at (571) 272-0987. The centralized fax number for the Group is (703) 872-9306. The examiner Rightfax number is (571) 273-1158.

Betsey M. Hoey

BETSEY MORRISON HOEY
PRIMARY EXAMINER

May 23, 2005